# Rebuild Iowa Office

Governor Chester J. Culver
Lt. Governor Patty Judge, RIO Executive Director

To: Committee on Senate Agriculture
Nutrition, Forestry and the Committee on Homeland Security and Governmental Affairs
Ad Hoc Subcommittee on Disaster Recovery

From: Lyle W. Asell

Date: September 24, 2008

Re: Comments on Assessing the Effectiveness of Agriculture Disaster Assistance Programs

Good morning, I am Lyle Asell from the Iowa Department of Natural Resources assigned to the Rebuild Iowa Office. Governor Culver established this office to help Iowa recover from the devastating storms of 2008. Tornados, intense rain, flooding, hail and high winds began in May and still continue. As recently as 10 days ago, Southeast Iowa received over 9 inches of rain which flooded previously un-flooded areas. From an agricultural point of view this has been a difficult year with delayed planting in less than ideal situations, in fact about one million acres will not produce a crop this year. Iowa farmers use risk management tools such as Federal Crop Insurance on approximately 90 percent of their land. However, these tools can not address some of the most serious and long lasting damage to the land itself.

The Emergency Watershed Program (EWP) is one of the most effective programs available to assist Iowa farmers and rural communities recover from such events. Demand for EWP assistance, to date, exceeds $225 million for Iowa alone. This includes damages to soil and water conservation practices estimated at $40 million by the Iowa Department of Agriculture and Land Stewardship (IDALS) and the Natural Resources Conservation Service (NRCS). The Emergency Conservation Program (ECP) also provides funding to assist farmers repair these practices; however, Iowa received less than $10 million which is all committed predominantly to remove debris from farm fields. For example, one farmer has a cost estimate of $800,000 to remove sand from his land.

In addition to the financial assistance there is a need of $8 million to provide technical assistance to farmers in repairing this damage. Iowa NRCS staff has been reduced to about 20 percent in the last two years and technical assistance from IDALS has also declined about 25 percent. This is a serious concern and we encourage funding to meet this need.

Another $36 million in EWP is needed to help repair damages to stream banks and remove debris normally associated with rural roads and bridges, repair levees, etc. With harvest just beginning, protecting the rural transportation infrastructure is important.

The greatest damage was to floodplain farmland. Floodwaters scoured large holes, and in some places all soil has gone down to bedrock. In others, large deposits of sand make it financially impossible to restore to farmable land. Congress made a significant and effective policy change following the floods of 1993 when they created the Emergency Wetland Reserve Program (EWRP).

For the first time, farmers had an alternative to restoring badly damaged lands to cropland. Success of this change was evident in this years flooding with those areas enrolled having little damage, no cost to the taxpayer and temporarily storing floodwater. The program is still available but now called the EWP-Floodplain Easement.
With record crop prices and high land values, the decision to apply for a flood plain easement could not be easy. Yet about 400 Iowa farmers have applied on lands exceeding 35,000 acres at an estimated cost of $150 million. The total continues to grow as more realize the damage is so severe or flooding so frequent that continuing to farm is not practical. Sign-up continues through the end of this month and expectations are the total demand will increase.

My experience with farmers is that they are good business people. They want to do what they do best which is raising crops and livestock. They also want to make a profit and provide for their families. These objectives are not met by entering into high risk ventures such as farming flood damaged lands or frequently flooded lands. The EWP easements provide assistance to the farmers by buying a perpetual easement based on the agricultural value of the land. This allows them to receive most, but not all, of the value of the land which they can invest in lower risk ventures thus helping to stabilize their entire farming operation.

Most prefer getting 100 percent of the value of their property and want to eliminate non income generating assets such as land with an easement that does not allow crop or livestock production. They are usually not interested in management for wildlife habitat and prefer not paying property taxes without generating income. In the past; governmental agencies have assisted some farmers by buying the remaining value. This is a symbiotic relationship---there are no winners and losers—everybody wins. The farmer receives full value for their land and the public receives wildlife habitat, carbon sequestered, recreational access, water quality improvement and reduced costs from future flooding. The 2008 Farm Bill has a provision that will prevent governmental agencies from receiving restoration funding which will make it more difficult for them to assist farmers in reaching their objectives. This provision seems to imply governmental agencies are benefiting at the expense of farmers. In Iowa this is simply not true. At a time when farmers are under great stress taking options away from them is not helpful.

Funding EWP completely and soon is critical. The current need of $225 million will grow. Voluntary applications, by 400 farmers for the EWP floodplain easement program indicates how serious the need truly is. Decisions to apply were not made lightly, they simply have no other viable options and they need to make decisions on how to proceed very soon. Congress has appropriated funding for the program that may not be adequate in view of recent hurricanes. I encourage you to make adequate resources available and that the USDA move rapidly to allocate resources to states so recovery can move forward. Iowa is a relatively small state and we know how to work together for the benefit of the people and our resources. Give us the tools we need and we will put it back together for the benefit of the future as well as current citizens.

**COVER CROPS**

Flooding and /or ponding of water can result in post flood or fallow syndrome on cropland. There is an association between the fallow period and decreased mycorrhizal (beneficial fungi) colonization potential for the succeeding crop. Mycorrhizal fungi affect plant uptake of essential nutrients including P and ZN. These fungi are dependent on host plants to complete their life cycle and if plants are not available mycorrhizal hyphae and spores are substantially reduced. As a result crops planted the following year, especially corn, are slow to be infected because of the relatively small number of spores present. Grain yield can be reduced about 15 percent for corn following fallow versus crop following a cover crop.

The use of cover crops has been shown to be an effective way to minimize this syndrome. In addition are effective at tying up 20-50 pounds of N per acre, reducing erosion and increasing soil organic matter content. It was decided a program to assist farmers plant cover crops would be beneficial to both crop production and the environment. With two weeks to put together a program, obtain funding and roll it out; a serious challenge was at hand. The back up plan was for an information campaign by commodity organizations, state and federal agencies. We failed to obtain funding for the program but did have a successful information campaign that led to some cover crops being planted.

There are other benefits to cover crops and a variety of projects and activities are underway to promote their use. This attempt pulled together the interested groups and should lead to improved coordination and cooperation. Information needs to be readily available after future floods to help farmers avoid adverse impacts of flood syndrome.

# Floodwater and Sediment Monitoring

Mary Skopec
Watershed Monitoring and Assessment Section
Iowa DNR

# Flood Monitoring

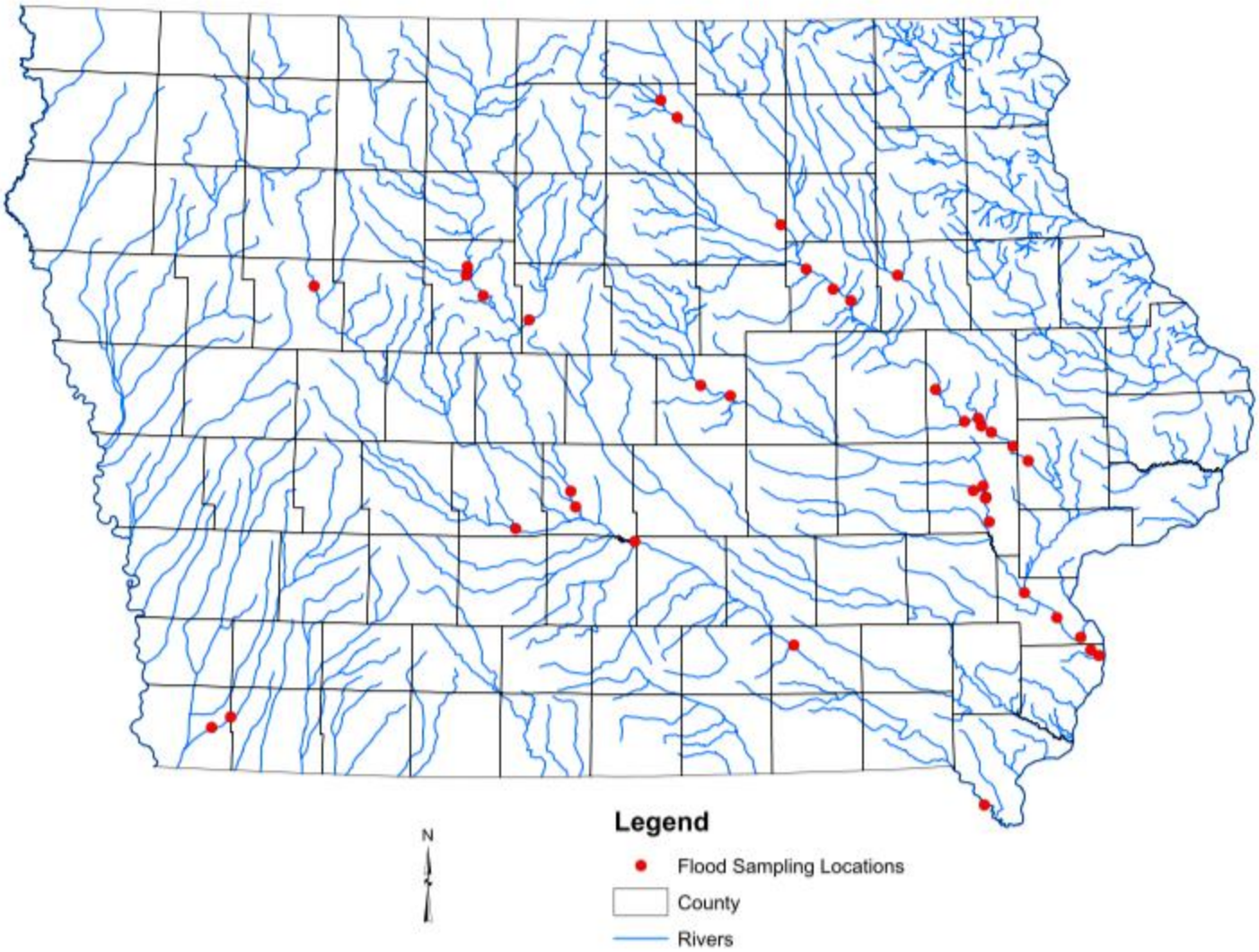
- WMS contacted University of Iowa Hygienic Laboratory and USGS for flood monitoring assistance.
- Began intensive flood water monitoring on June 9th. Sampling concluded Sept. 4th.
- Weekly samples from ambient sites located around major urban areas; supplemented sites later.
- Daily bacteria sampling downstream of Cedar Rapids, Prospect Park in Des Moines.
- Preliminary Results from UHL reported within a week of initial sampling and currently June, July, August reported.
- USGS results expected later this fall.
- Contrast with 1993 where essentially no flood or post-flood monitoring was conducted by the state.

# 25 Regular Sample Locations

Cedar River at Waterloo US
Cedar River at Waterloo DS
Wapsipinicon at Independence
Shell Rock at Shell Rock
Winnebago, Mason City US
Winnebago, Mason City DS
South Raccoon River at Redfield
Raccoon River at Des Moines US
Des Moines River at Des Moines US
Des Moines River at Des Moines DS
East Nishnabotna near Shenandoah
Boone River near Stratford

Iowa River at Iowa City US
Iowa River at Iowa City DS
Des Moines River near Keokuk*
Iowa River at Columbus Junction
Iowa River at Marshalltown
North Raccoon River near Sac City
Des Moines River at Ottumwa US
Des Moines River at Ottumwa DS
Lizard Creek at Fort Dodge US
Des Moines River at Fort Dodge US
Des Moines River at Fort Dodge DS
Iowa River at Wapello
Iowa River at Oakville*

US = upstream; DS = downstream: * not a regular ambient site


N
Legend
Flood Sampling Locations
County
Rivers

# Additional Sample Locations

- Streams
  - Cedar River at Sutliff
  - Camp Cardinal Creek Coralville
  - Iowa River at Hwy 6 Iowa City
  - Prospect Park Des Moines River (bacteria only)
- Sediment
  - Cedar Rapids
  - Coralville/Iowa City
  - Waterloo/Cedar Falls
  - Oakville

# Analytes (~ 140 individual )

| | |
|---|---|
| • Oil and Grease | EPA 1664 |
| • Total Extractable Hydrocarbons | UHL OA-2 |
| • GC/MS Volatiles | EPA 8260 |
| • Gasoline | UHL OA-1 |
| • Semi-volatiles | EPA 8270, PREP EPA 3510 |
| • N & P-Containing Pesticides | EPA 507, EPA 508 |
| • E. coli | EPA 1603 |
| • CBOD5 | SM 5210B |
| • Metals | EPA 200.7 or 200.8 |
| • Ammonia Nitrogen as N | LAC10-107-06-1J |
| • Nitrite + Nitrate as N | EPA 353.2 |
| • TKN | LAC10-107-06-2E |
| • Orthophosphate as P | LAC10-115-01-1A |
| • Total Phosphate as P | LAC10-115-01-1D |
| • Total Dissolved Solids | SM 2540C |
| • Total Suspended Solids | USGS I-3765-85 |
| • Total Volatile Suspended Solids | EPA 160.4 |

# Results: June –August

- Nearly 60,000 individual analyte results for water; 22,000 individual analyte results for sediment
- July-Aug results are preliminary and subject to change as the laboratory finishes data quality assurance/quality control checks.

# Water Samples

- Most analytes not detected in floodwaters
  - June 85% non-detection rate
  - July 91% non-detection rate
  - August 92% non-detection rate
- Detections of nutrients, bacteria, common herbicides
- Isolated detections of metals, volatiles, semi-volatiles

# June Water Samples

- Acetochlor
  - 0.05 ug/L to 2.4 ug/L
- Atrazine
  - 0.1 to 3.6 ug/L
- Total Ammonia
  - 0.05 to 0.25 mg/L
- Nitrate
  - 3 to 13 mg/L
- Total Phosphate
  - 0.13 mg/L to 3.3 mg/L
- E. coli
  - 10 cfu/100ml to 380,000 cfu/100ml

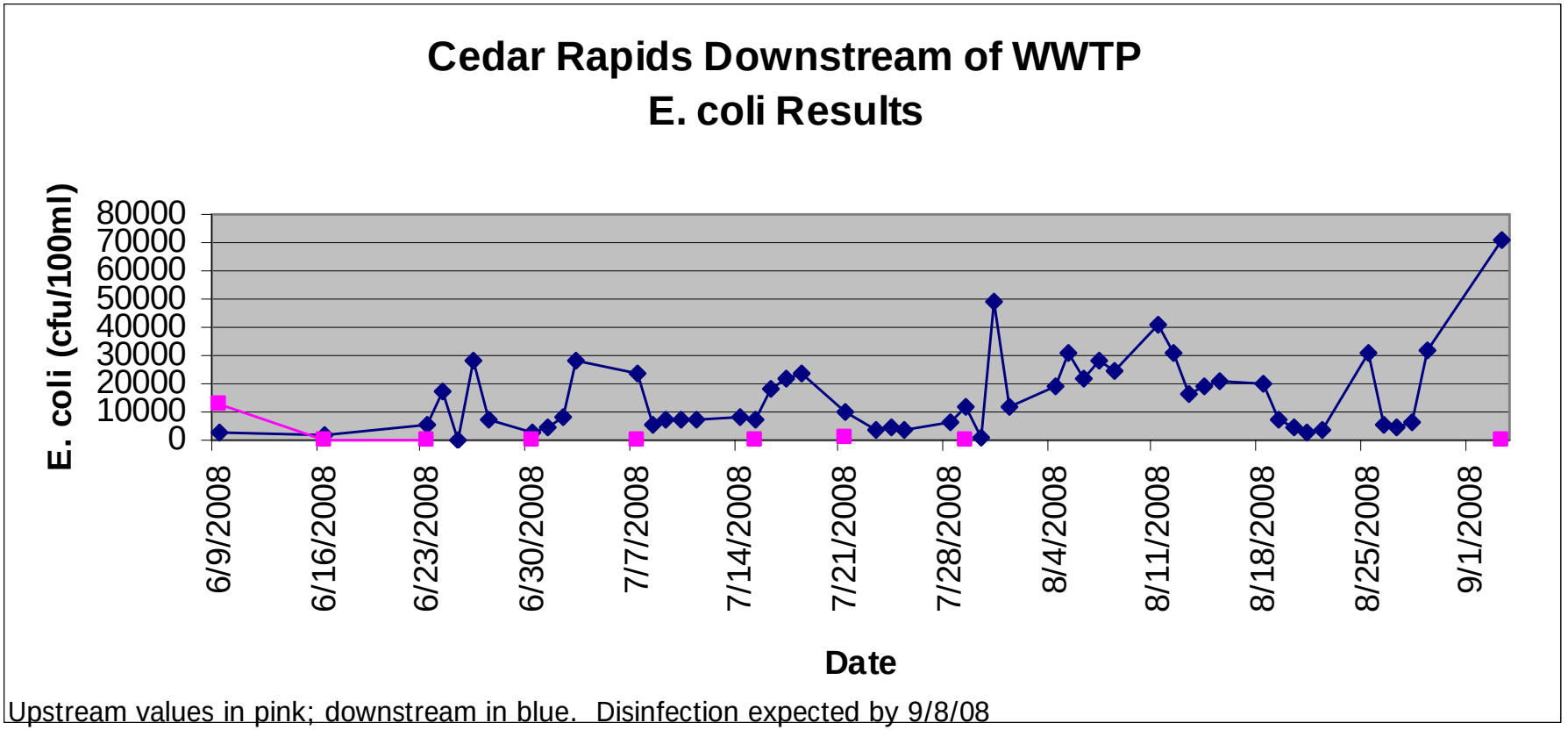
# July Water Samples

- Acetochlor
  - 0.05 ug/L to 0.71 ug/L
- Atrazine
  - 0.072 to 2.8 ug/L
- Total Ammonia
  - 0.06 to 0.14 mg/L
- Nitrate
  - 0.56 to 14 mg/L
- Total Phosphate
  - 0.07 mg/L to 2.8 mg/L
- E. coli
  - 10 cfu/100ml to 280,000 cfu/100ml

# August Water Samples

- 2,4-D
  - 16 ug/L
- Acetochlor
  - 0.05 to 0.18 ug/L
- Atrazine
  - 0.05 to 1.4 ug/L
- Ammonia
  - 0.05 to 0.19 mg/L
- Nitrate
  - 0.09 mg/L to 9.7 mg/L
- E. coli
  - 10 cfu/100ml to 46,000 cfu/100ml
- Hexane Extractable Mat.
  - 6.9 ug/L
- Total Phosphate
  - 0.03 to 0.45 mg/L
- Total Suspended Solids
  - 9 to 320 mg/L

# Cedar Rapids Wastewater




Upstream values in pink; downstream in blue. Disinfection expected by 9/8/08

# Sediment Samples

- Most analytes not detected
  - June –August 96% non-detections
- Bacteria levels ranged from very high to low depending on the site conditions
  - 2 MPN/g to >24,000 MPN/g in Marshalltown

# Sediment Samples

- Consistent Low-level Detections of:
  - Metals
    - Arsenic, Chromium, Copper, Lead, Zinc
  - Motor Oil
    - 8 to 1900 mg/kg
  - Acetone
    - 10 to 66 ug/kg
  - Atrazine
    - 0.01 to 0.039 ug/kg

# Potential Health Effects - Sediment

- Sediment data were reviewed by IDNR Contaminated Sites Section Staff
- Only one sample (Lead) above State Standards or Guidelines.
- Contaminated Sites Section –Lead guideline assumes children eating 200 mg of soil for 350 days/yr for 6 yrs plus an additional 100 mg/day for 350 days/yr for another 24 years.

# Flood Sediments vs. State Standards

| Chemical | Max Concentration | Statewide Standard |
|---|---|---|
| 2-Butanone (MEK) | 20 ug/kg | 46,000,000 ug/kg |
| 4-Methyphenol | 860 ug/kg | 310,000 ug/kg |
| Acetochlor | 0.12 mg/kg | 1,200 mg/kg |
| Acetone | 66 ug/kg | 68,000,000 ug/kg |
| Atrazine | 0.039 mg/kg | 2,100 mg/kg |
| Bis(2-ethylhexyl)phthalate | 750 ug/kg | 170,000 ug/kg |
| Diesel Fuel | 60 mg/kg | 3,800 mg/kg* |
| Dimethenamid | 0.02 mg/kg | No standard** |
| Ethylbenzene | 22 ug/kg | 7,600,000 ug/kg |
| Gasoline | 1.7 mg/kg | No standard |
| Motor Oil | 1900 mg/kg | Unlimited |
| Pendimethalin | 0.011 mg/kg | 2,400 mg/kg |
| Arsenic | 4.8 mg/kg*** | 17 mg/kg |
| Chromium (+6) | 80 mg/kg | 210 mg/kg**** |
| Copper | 270 mg/kg*** | No standard |
| T E H | 1,900 mg/kg | 3,800 mg/kg* |
| Lead | 2,900 mg/kg | 400 mg/kg |
| Nickel | 58 mg/kg | 1,500 mg/kg |
| Zinc | 1,500 mg/kg | 23,000 mg/kg |

* UST Standards

** Previous UST gasoline standard was 100 mg/kg; Benzene SWS=88mg/kg

***Typical concentration found in soil

****SWS for more likely chromium (+3)=97,000mg/kg

*****No statewide standard currently set, but would be large

# Areas of Future Focus

- DNR Compilation of "Lessons Learned"
  - Increase information flow to front line of responders (ex. county/city health)
  - Examine methods of information transfer (see above, targeted pamphlets, others?)
  - Prepared Guidelines for Clean-up
  - Human health vs. Environmental health
  - Improve monitoring –faster results, targeting areas of concern, differentiate flood and post-flood concerns

# Contact Information

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**Quick Facts on Floods and Floodplain Maps**

- About 8% of Iowa is floodplain – areas of land that either have been or could be inundated by floodwaters. The width of the floodplain at a particular location can vary from less than 100 feet to over two miles. The frequency and depth to which floodplain land can be flooded also varies considerably from location to location.

- Since 1965, Iowa has had a floodplain regulatory program that regulates things like buildings, levees, dams, channel alterations and other floodplain construction.

- Most home and business insurance policies do not cover flood losses. If a city or county has joined the National Flood Insurance Program, anyone anywhere within the city or within the unincorporated areas of the county can buy a flood insurance policy.

- The so-called 100 year flood is just an intermediate-sized flood. Much larger floods can and do occur with some regularity. Even the 500 year flood has been exceeded by a considerable amount in some areas.

- Most floodplain maps only show the 100 year floodplain – the area that would be inundated by the 100 year flood. Buildings outside the 100 year floodplain can still have a significant flood risk but most flood maps do not show this risk. For instance, land lying just outside the 100 year floodplain actually has about a one-in-four chance of flooding over a 30 year period.

- Essentially all the floodplain maps that exist today were produced by the federal government (FEMA) as part of the National Flood Insurance Program. Changes to those maps cannot be made without going through FEMA and meeting their mapping standards and procedural requirements.

- About 1/3 of Iowa's counties have no floodplain maps at all for their unincorporated areas. The remainder of the counties have partial to full coverage but the quality and detail of most of these flood maps is poor.

- Six hundred of Iowa's 947 cities are considered by FEMA to have flood hazard areas. Of these 600, about 150 have relatively good flood maps; the remainder have flood maps of poor quality and detail.

- Many of the cities that suffered extensive flood damage in 2008 (e.g., Cedar Rapids, Iowa City, Cedar Falls) have relatively good flood maps that were recently updated or were in the process of being updated. The problem is not the accuracy or date of the maps. Instead, it's that the 2008 floods exceeded the 100 year and even the 500 year flood in many locations, inundating areas that were not within the floodplain as shown on the maps. Many buildings that were protected or flood proofed to the 100 year flood level as required under state and NFIP regulations sustained considerable flood damage.

- LIDAR-based topographic data, which is being acquired for the entire state, makes it possible to produce high-quality, detailed flood maps for the entire state at a reduced cost. Even then, meeting FEMA mapping standards for what are considered detailed study maps would likely exceed $300 million and take 20 years or more.

- Using a simplified floodplain mapping technique pioneered in Nebraska, relatively good floodplain maps could be developed for all of Iowa for an estimated cost of about $15 million over a ten year period. This would also provide the basis for being able to generate "on the fly" flood maps for disaster response and for determining what critical buildings and infrastructure might be vulnerable to large-magnitude floods like the floods of 2008. This would still be a very significant effort requiring a long-term commitment of resources.

- Cost: Estimated at $23.3 million
    - DNR, IDALS-DSC,IDOT and USDA NRCS committed funds and have a contract with USGS to acquire statewide LiDAR data----------$4.3 million
    - The Iowa Pooled Technology Fund provided $500,000 in FY '09 to acquire photography cover one half of the state to be used in conjunction with LiDAR. Anticipate funding and acquiring photography for the remainder of the state in FY '10. Photography total estimated cost is----------$1 million
    - The LiDAR data will enable Iowa to develop floodplain maps faster and cheaper. The estimated cost for good, statewide floodplain maps is----------$15 million
    - The remainder is for delivery of the data and technical assistance to communities and rural areas at an estimated cost of----------$3 million (cost includes hardware and modeling)

# Soil and Water Conservation Update from the Iowa Storm Events of 2008

Jim Gillespie

Division of Soil Conservation

# 2008 Flood Damage Assessment Survey

Sent to all 100 soil and water conservation districts

- Estimated acres suffering severe damage
  - 20 tons per acre soil erosion: 2,284,000 ac.
  - Bottomland scouring: 636,000 ac.

- Estimated Damage to conservation practices
  **$40 million**

# 2008 Flood Damage Assessment Survey--Results

- Number of conservation practice sites needing repair

| | |
|---|---|
| Grassed Waterways | 12,157 |
| Terraces | 8,137 |
| Water and Sediment Control Basins | 3,375 |
| Grade Stabilization Structures | 800 |

# What's happened in the last 71 days…

- Practice Repair
  - NRCS Environmental Quality Incentive Program (EQIP) $4 million
  - FSA Emergency Cost Share Program – 68 counties have applications in excess of $34 million for repairs and other needs
  - NRCS Emergency Watershed Protection (EWP) has requested an additional
    - $40 million for repair
    - $35.5 million for traditional repair
    - $270 million for flood plain easements

# Implementing Conservation Practices

- Oct. 15, 2008 – 78 districts requested $13.5 million through state cost share program – **ONLY** $3 million to give out

HUGE demand for dollars – $31 million in EQIP on top of regular state cost share of $7 million

# IDALS Budget Considerations and Flood Recovery Plan

- Conservation and Water Quality
  - Flood Prevention $2.25 million
  - Maintenance and Restoration $11.2 million
  - Technical Assistance for Urban Conservation $450,000

A request was sent to the Governor on October 1

# Build a
# *"Culture of Conservation"*!

Jim Gillespie

Division of Soil Conservation

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Fields of Opportunities

STATE OF IOWA

CHESTER J. CULVER, GOVERNOR
PATTY JUDGE, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
RICHARD A. LEOPOLD, DIRECTOR

# Operational Procedure Order for Solid Waste Provisions

The Iowa Department of Natural Resources (Department) has adopted these policies on a temporary, emergency basis to provide guidance to the regulated public on management of solid waste resulting from the flood and tornado disasters. Some of the policies may be interpreted to vary from existing agency rules or expand existing rules to deal with these unique circumstances. In some cases, the emergency rules may establish new policy which existing agency rules do not address. . The Department believes the Iowa Administrative Procedures Act (Iowa Code chapter 17A) and Iowa Code section 29C.19 authorize adoption of emergency policy within its statutory authority. To the extent this emergency policy and the regulated public's compliance with it may be contrary to current agency rules, the Department does not intend to exercise its enforcement discretion as long as the regulated public affected by the disaster follows the emergency policy.

Guidance regarding the disposal of other types of flood-related waste will be provided by the Department upon request. All regular waste disposal activities for cities and rural areas not impacted by or having minimal impact from flooding should continue to be managed in accordance with normal waste management procedures.

This Operation Procedure Order (Order) applies to debris waste resulting from the flood and tornado disasters in counties covered by a disaster declaration issued pursuant to Chapter 29C of the Code of Iowa and is in effect for 90 days from the day of issuance. After 90 days, the Department shall review conditions in the impacted areas and revise or reissue this authorization as necessary.

For the areas within the counties designated by the Governor's Disaster Proclamation (http://flood2008.iowa.gov) and the regulated public affected by the disaster, the following authorizations and clarifications shall be effective for the term of this Order:

1. Pursuant to Chapter 567 IAC 106.2, a "transfer station" and a "citizen convenience center" are both defined as permanent, fixed-location facilities. Temporary locations established for the collection and transfer of flood-related solid wastes are not permanent, fixed-location facilities and shall not be required to obtain an individual permit pursuant to Chapter 106.

2. Pursuant to 567 IAC 106.3(11) the Department may issue an emergency solid waste transfer permit if:
   a. It is not technically feasible to direct haul with solid waste collection vehicles and manage the solid waste at another sanitary disposal project or combination thereof in the service area or surrounding service areas; and

b. Solid waste must be transferred from the area in order to protect human health and the environment.

The conditions of an emergency solid waste transfer permit shall be determined by the department and may be used as an alternative to the requirements of Chapter 106.

3. Pursuant to 567 IAC 106.3(11), the Department hereby issues an emergency solid waste transfer permit as follows:

a. The emergency permit is hereby issued to each local solid waste management agency within the areas covered by this Order.
b. The emergency transfer facility must be under the control or direction of the local solid waste management agency.
c. The agency operating the emergency transfer station shall notify the Department within 24 hours of beginning transfer operations.
d. Transfer may occur outdoors.
e. Transfer shall occur on an impervious surface.
f. Wastes delivered to the emergency transfer station shall be loaded into transfer trailers as soon as practicable but not later than 24 hours after delivery.
g. Reasonable steps shall be taken by the local solid waste agency to limit site access, control vectors, control dust and litter, and contain stormwater and other liquids.

4. The outdoor processing and grinding of construction and demolition debris is hereby authorized in those areas covered by this Order as follows:

a. The outdoor processing and grinding may only occur if authorized by the local solid waste agency and Department Air Quality Bureau. In the case of grinding that is to occur in Linn County or Polk County, authorization is necessary from the Linn County Public Health Department Air Quality Division or Polk County Air Quality Division respectively.
b. The Department shall be notified within 24 hours of beginning processing and grinding operations.
c. All storage and processing shall occur on an impervious surface.
d. Outdoor processing and grinding must be done in a manner that minimizes fugitive dust.
e. Unprocessed construction and demolition debris may not be stored at the site of processing for more than 24 hours.
f. Processed construction and demolition debris may not be stored at the site of processing for more than 72 hours.

5. Municipal Solid Waste Landfills are hereby authorized to accept and dispose of non-hazardous contaminated soils without the need to remediate those soils. Such soils shall not be used as alternate daily cover unless a request is made and the permit is amended prior to its use.

6. Pursuant to 567 IAC 101.7(3)"b", debris arising from a natural disaster in a county covered by a disaster declaration issued pursuant to Chapter 29C of the Code of Iowa are exempt from the solid waste tonnage fee imposed by section 455B.310. Pursuant to paragraph 101.7(3)"b", a request to waive tonnage fees may be made within 6 months after the initial disposal of the debris.

7. The Department recognizes that disaster debris may be commingled with other solid wastes, making it difficult to quantify the amount of debris exempted from the state tonnage fee for purposes of paragraph 101.7(3)"b". The Department hereby authorizes solid waste agencies for the areas covered by this Order to use reported tonnage for the corresponding 1st quarter of fiscal year 2008 to determine the tonnage fee due for the 1st quarter of fiscal year 2009 (July 1, 2008 through September 30, 2008). To the extent that debris is accepted prior to July 1, 2008, an individual solid waste agency may apply for permission to base the tonnage fee determination for the 4th quarter of fiscal year 2008 on the tonnage accepted during the 4th quarter of fiscal year 2007. If a solid waste agency is able to accurately track disaster debris from normal solid waste received then tonnage fee payment based on actual normal solid waste received will be accepted.

8. The Department hereby waives the 30-day time period for public notice prior to authorization of a permit action request provisions of 567 IAC 113.4(12)"c". This waiver is based upon a need for rapid authorization of permits and permit amendments in order to protect human health and the environment. The Department has determined that the waiver of this provision is in compliance with 561 IAC 10.4, as adopted by reference at 567 IAC 13.1. Interested persons may submit comments to the Department within 30 days of the issuance of a final permit or final permit amendment subject to this waiver and the Department will consider those comments to determine whether further modification of the permit or other action by the Department is appropriate.

9. Sanitary landfills within the area covered by this Order that are unable to deliver leachate to the wastewater treatment facility designated in the landfill permit are authorized to dispose of leachate at any permitted facility capable of accepting the leachate without violating the discharge permit of the receiving facility. If a sanitary landfill is unable to locate a feasible disposal option, the sanitary landfill shall contact the Department Field Office with jurisdiction over the landfill to determine appropriate temporary leachate management options.

10. Temporary storage of more than 1,000 discarded appliances (white goods) stored at a location prior to demanufacturing is hereby authorized in those areas covered by this Order as follows:

a. The temporary storage location may exist as authorized by the local solid waste agency, city or county having local jurisdiction over the storage location.
b. The Department shall be notified of the storage location within 24 hours of beginning storage.
c. All storage shall occur on an impervious surface.
d. Appliances must be stored as to prevent electrical capacitors, refrigerant lines and compressors, and mercury-containing components from being damaged and allowing a release into the environment.
e. No method of handling discarded appliances may be used which in any way damages, cuts or breaks refrigerant lines or crushes compressors, capacitors, or mercury-containing components, or may cause a release of refrigerant, PCBs or mercury into the environment.
f. Discarded appliances may not be stored for more than 270 days before being demanufactured.

11. The Department hereby waives the Department notification and sanitary landfill permit amendment requirements of 567 IAC 108.8(455B, 455D) for the use of sandbags as alternative daily cover at a sanitary landfill. The total tonnage of sandbags used as cover shall be reported as alternative daily cover using Form 98, Quarterly Solid Waste Fee Schedule and Retained Fees Report.

June 23, 2008

Richard Leopold
Director
Iowa Department of Natural Resources

Patrick Hall
State Coordinating Officer
Iowa Homeland Security Emergency Management

**Disaster Debris Impacts to Iowa Landfills – Update October 9, 2008**

As discussed with the Task Force previously, there are three stages of flood recovery that impact landfills: initial clean up of debris from residences and businesses, demolition of structures that are uninhabitable and construction and demolition wastes from the rebuilding process.

Except for a few areas in the southeast portion of the state, the first stage has been completed. The state is now in the waiting period before stage two begins. It could be several months to a year before dwellings and other buildings are demolished. The amount of time it takes depends on whether or not cities will condemn or buy out properties, how FEMA factors into reimbursements and the number of structures to be demolished.

How does this impact Iowa landfills? Many of the landfills in the areas most impacted by the floods have almost reached disposal capacity in their existing landfill cells. In order to keep up with day-to-day garbage collection for their residents they are forced to construct new disposal cells much faster than they had planned or budgeted for. Because the time frame for demolition of structures is unknown, it also makes it difficult to determine how large to build the next landfill disposal cell. Budgets have been thrown off already and if the cell is too small then they spend more money to construct another cell. If the cell is too large because the waste flow is less than expected or structures are not torn down as anticipated, there is not enough money to pay for the cell that was constructed. Although there is no good time for a disaster to occur, it could not have been worse timing for Iowa's landfills. Federal rules implemented by the state last year to require all landfills to have an engineered liner and more extensive groundwater sampling and monitoring program resulted in significant costs for Iowa landfills. Budget were tight to begin with and having to build more disposal cells as a result of flood debris filling up the existing cells has put even more strain on Iowa communities.

The additional requests for cell construction also impacts DNR staff. We have three engineers responsible for 45 open municipal waste landfills. It can take several weeks to several months to review and approve engineering documents for landfill construction. Approval from the DNR is needed before landfill disposal cells are constructed. While we have made these construction requests a priority, it still results in an extended wait time and other day-to-day activities suffer as a result.

As stated previously, two landfills in the state received approval to reopen closed landfills. Those were the city of Cedar Rapids/Linn County and Des Moines County. No new requests have been made. The city of Cedar Rapids/Linn Co. Solid Waste Agency has approval to use the reopened landfill until a new cell can be constructed at the Agency's other open landfill. The timeframe is expected to be at least another six months. The Des Moines County Solid Waste Commission has been given tentative approval to use the unlined landfill until March 30, 2009 at which time they'll need to divert any future flood waste into the lined landfill cell that is on site.

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Solid Waste Permitting & Engineering
Iowa DNR
515-281-6807
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# Flood Control in the Upper Mississippi Valley

What Must Be Done NOW

# Q: What is the difference between these photos?

Photo taken in 1993

Photo taken in 2008

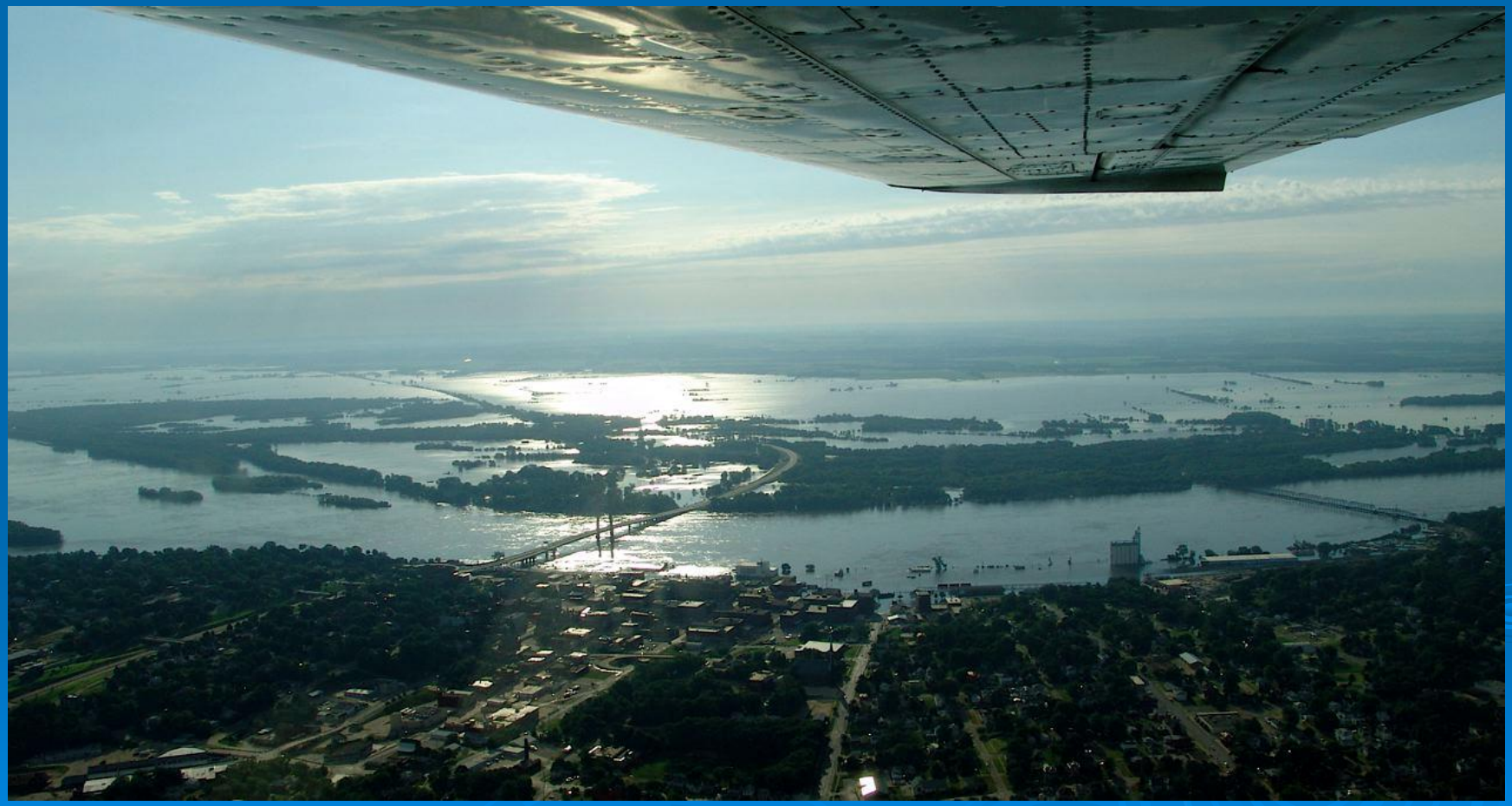
# A: Nothing

- The reality is that little has changed since 1993 with regard to our ability to defend ourselves from catastrophic flooding

# The Need

- The Floods of 1993 and 2008 devastated this region of the country
- The 1993 flood produced $15 billion in damages.  Numbers are not yet available for 2008, but early estimates are $18 billion
- Lost wages and earnings
- Loss of life
- Damage to thousands of homes
- Loss of family farms and heritage

# The Need



# The Need



# The Need

# The Need

# The Need

# The Need

# The Need

# The Need

## Lock & Dam #20

Normal Conditions

# The Need

# The Need

# The Need

# The Need

- Until something is done, those in the Upper Mississippi Valley will continue to endure stunning hardship – economic damages, loss of life and loss of property
- Moreover, our economic potential is severely hampered by inadequate flood control

# The Need

- In fact, every $1 spent on comprehensive flood control at the 500-year level would generate nearly $5 dollars in increased farm income, damages avoided, enhanced economic development and the spending that would result from increased wealth
- Enhanced flood control will create jobs and increase income in this region of the country, but these are investments that industry will not make until flood protection is provided
- Land values would increase based on enhanced flood protection

# The Need

- Permanent employment could increase by as many as 25,000 employees in the Mississippi and Illinois floodplains
- Farm land would become more productive with increased flood protection

# Flood Control is Achievable

- The good news is that we now know that system-wide flood protection can be achieved
- After years of study, the Corps of Engineers has just completed the Upper Mississippi River Comprehensive Plan
- The plan now needs Congressional approval and a corresponding appropriation so that we can get started

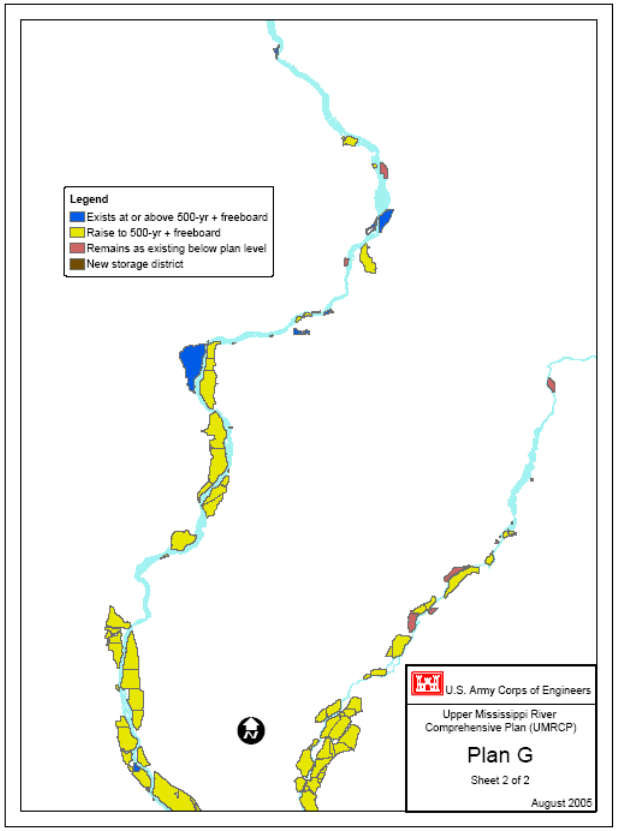
# Comprehensive Plan Options

- There were several options outlined, of which 3 would provide system-wide flood control. The 3 options – Plans G, H and M – offer:
- 500-year protection (.02 %) for most currently-protected urban and agricultural areas
- 500-year ring levees with no new development for unprotected towns
- (Plan H) Government may consider purchasing assets in areas where levee improvement costs exceed asset values and where there are willing sellers

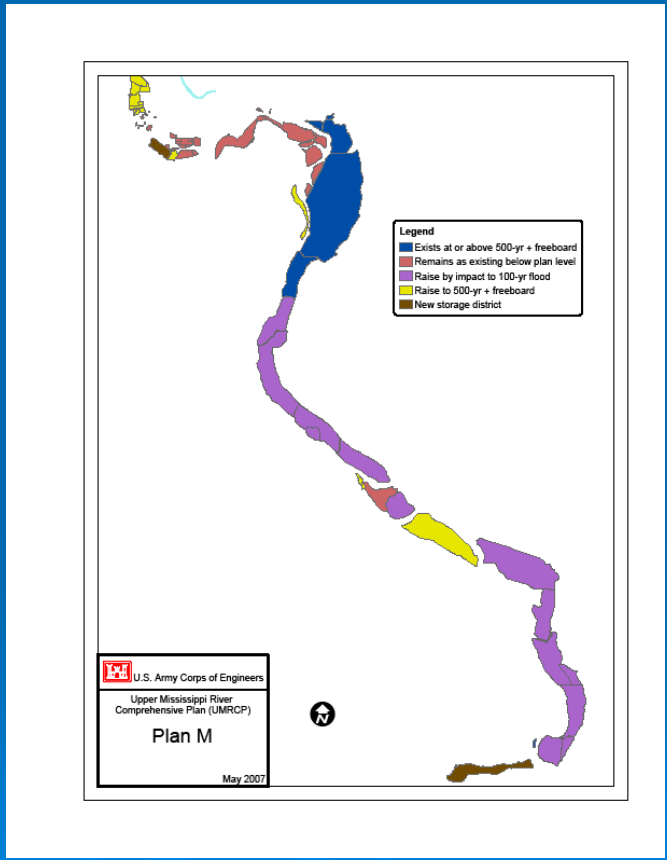
# Comprehensive Plan Options

- Both Illinois and Missouri Governors have endorsed Plan M
- UMIMRA and the Illinois Farm Bureau have endorsed Plan M as it offers some additional protection to those south of St. Louis

# Plan M Overview – North



# Plan M Overview – South



# What Must Be Done Now

- Congress must authorize the adoption of one of the Comprehensive Plan options (G, M or H) that offers systemic flood control
- We need corresponding appropriations to begin work on levee improvements.
- We are asking Congress to appropriate $6 billion to begin work on levee enhancements immediately

# How You Can Help

- Contact Your Congressional representatives and ask them to support adoption of the Comprehensive Plan and a corresponding appropriation
- In Illinois, contact:
  - U.S. Senator Barack Obama (D-Illinois)
  - U.S. Senator Dick Durbin (D-Illinois)
  - U.S. Rep. John Shimkus (R – Illinois – 19th)
  - U.S. Rep. Ray LaHood (R-Illinois-18th)
  - U.S. Rep. Mark Kirk (R-Illinois -10th)
  - U.S. Rep. Phil Hare (D-Illinois – 17th)
  - U.S. Rep. Jerry Costello (D- Illinois 12th)
  - U.S. Rep. Jim Oberstar (D-Minnesota – 8th)
  - Senator John McCain (R-Arizona)

# How You Can Help

- In Iowa, contact:
  - U.S. Senator Charles Grassley (D-Iowa)
  - U.S. Senator Tom Harkin (D-Iowa)
  - U.S. Rep. Bruce Braley (D-Iowa-1st)
  - U.S. Rep. David Loebsack (D-Iowa- 2nd)
  - U.S. Rep. Tom Latham (R-Iowa-4th)
  - U.S. Rep. Steve King (R-Iowa-5th)
  - U.S. Rep. Leonard Boswell (D-Iowa-3rd)
  - U.S. Rep. Bruce Braley (D-Iowa-1st)
  - U.S. Rep. David Loebsack (D-Iowa-2nd)
  - U.S. Rep. Jim Oberstar (D-Minnesota – 8th)
  - U.S. Senator Barack Obama (D-Illinois)
  - Senator John McCain (R-Arizona)

# How You Can Help

- In Missouri, contact:
  - U.S. Senator Christopher “Kit” Bond (R-Missouri)
  - U.S. Senator Claire McCaskill (D-Missouri)
  - U.S. Rep. JoAnn Emerson (R-Missouri-8th)
  - U.S. Rep. Kenny Hulshof (R- Missouri – 9th)
  - U.S. Rep. Russ Carnahan (D-Missouri - 3rd)
  - U.S. Rep. William Lacy Clay (D-Missouri -1st)
  - U.S. Rep. Todd Akin (R– Missouri – 2nd)
  - U.S. Senator Barack Obama (D-Illinois)
  - U.S. Rep. Jim Oberstar (D-Minnesota – 8th)
  - Senator John McCain (R-Arizona)

# How You Can Help

- For a copy of this presentation, fact sheets and Congressional contact information, visit UMIMRA's website at www.umimra.org or call 217/522-4109

# TWO RIVERS LEVEE & DRAINAGE ASSOCIATION


D7H


2008 7 23


04/09/2008


To Lake Odessa
Blue: Iowa River
Green: Levee
Orange: Levee Breach
Yellow: Roads protected by Levee
LEVEE #11
Lake Odessa
Wapello
126 Ave.
99
83rd St.
G62
X61
93rd Ave.
77th St.
75th St.
County Rd. X6
119th Ave.
114th Ave.
123rd Ave.
61 Ave.
Iowa River
Myerhoff Slough
Stone Lake
Goose Lake
Keevers Lake
Ditch J
55th St.
F Ave.
E Ave.
To Oakville